**Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-6 (canceled)

7. (previously presented) A method for modifying routing using a topological address space map of a system having a plurality of networks connected to a backbone via a plurality of entry points, the method comprising:

monitoring the entry points of a plurality of messages arriving from the plurality of networks;

correlating the plurality of message entry points with their associated message source address ranges to develop the topological address space map of the system; and

using the topological address space map to implement modified routing.

8. (previously presented) The method of claim 7, wherein using the topological address space map to implement modified routing further comprises:

subject to a determination that the amount of messages from a first source address range arriving from a first path exceeds a first threshold amount, preferencing all messages to a destination address within the first source address range to travel via the first path.

9. (previously presented) The method of claim 8, wherein using the topological address space map to implement modified routing further comprises:

subject to a determination that the first path has not been preferenced, and further subject to a determination that the amount of messages from the first source address range arriving from the first path exceeds a second threshold amount, deaggregating a published route associated with the first source address range.

10. (original) The method of claim 9, wherein the first source address range is a group of addresses corresponding to the same Internet Protocol address and mask.

11. (original) The method of claim 9, wherein the first threshold is a preset percentage of the total amount of messages from a first source address range.

12. (original) The method of claim 9, wherein the second threshold is a preset percentage of the total amount of messages from a first source address range.

13. (previously presented) A method for performing traffic routing management in a network, the method comprising:

monitoring source address ranges for a plurality of signals;

monitoring arrival network connection points for the plurality of signals; and

developing a topological address space map of the network.

14. (previously presented) The method of claim 13, further comprising:

using the topological address space map to route a signal to a network connection point closest to a destination address range of the signal.

15. (previously presented) The method of claim 14, wherein using the topological address space map further comprises:

preferencing a route table route that is not selected naturally according to a network routing protocol and is not prohibited according to a network configuration parameter, subject to a determination that the route exceeds a signal quantity threshold.

16. (original) The method of claim 15, wherein the network routing protocol is the Border Gateway Protocol.

17. (original) The method of claim 15, wherein preferencing a route table route includes modifying the local preferences for the route.

18. (original) The method of claim 15, wherein the signal quantity threshold is a preset percentage of the total number of signals from the source address range corresponding to the route.

19. (original) The method of claim 15, wherein the signal quantity threshold is a preset number of signals.

20. (previously presented) The method of claim 14, wherein using the topological address space map further comprises:

injecting a new route within the source address range of a signal into the network.

21. (original) The method of claim 20, wherein the step of injecting a new route includes issuing a route announcement using a Border Gateway Protocol session from an external system.

22. (previously presented) The method of claim 14, wherein using the topological address space map further comprises reconciling differences between the topological address space map and existing routes in the network.

23. (original) The method of claim 13, wherein each source address range is an Internet Protocol address including a prefix length.

24. (original) The method of claim 13, wherein the network connection point is an interface.

25. (previously presented) The method of claim 13, wherein developing the topological address space map of the network further comprises:

collecting route entries from a route table on a router in the network; and

compiling signal traffic statistics entries on the monitored plurality of signals passing through the router in the network, wherein each signal traffic statistics entry includes a measure of the quantity of signals corresponding to a source address range.

26. (original) The method of claim 25, further including correlating each signal traffic statistics entry with a route entry.

27. (original) The method of claim 27, wherein each signal is an Internet Protocol packet.

28. (original) The method of claim 25, wherein each signal traffic statistics entry further comprises:

an Internet Protocol address;

a prefix length for the Internet Protocol address range; and an associated route entry.

29. (original) The method of claim 25, wherein each route entry comprises an advertised Border Gateway Protocol route.

30. (original) The method of claim 13, wherein the plurality of signals monitored includes the signals sent within the network.

31. (original) The method of claim 13, wherein the plurality of signals monitored includes a sampled portion of the signals sent within the network.

32. (previously presented) The method of claim 13, wherein the plurality of signals monitored includes:

a set of signals sent within the network; and

a set of signals generated to fill in portions of the topological address space map of the network.

33. (original) The method of claim 13, wherein the plurality of signals monitored includes a set of signals generated to provide substantially equal signal coverage of the network.

34. (previously presented) The method of claim 13, wherein monitoring is performed automatically and automatically used to develop the topological address space map.

35. (previously presented) The method of claim 14, wherein the process of using the topological address space map is performed automatically.

36. (original) The method of claim 15, wherein preferencing a route table route is performed automatically.

37. (original) The method of claim 20, wherein injecting a new route is performed automatically.

38. (original) The method of claim 25, wherein compiling signal traffic statistics is performed automatically.

39. (previously presented) A computer program product for performing traffic routing management in a network, the computer program product comprising:

a computer readable medium that stores program code including:

program code that monitors source address ranges for a plurality of signals;

program code that monitors arrival network connection points for the plurality of signals; and

program code that develops a topological address space map of the network.

40. (previously presented) The computer program product of claim 39, further comprising:

program code that uses the topological address space map to route a signal to a network connection point topologically closest to a destination address range of the signal.

41. (previously presented) The computer program product of claim 40, wherein program code that uses the topological address space map further comprises:

program code that preferences a route table route that is not selected naturally according to a network routing protocol and is not prohibited according to a network configuration parameter, subject to a determination that the route exceeds a signal quantity threshold.

42. (previously presented) The computer program product of claim 40, wherein program code that uses the topological address space map further comprises:

program code that injects a new route within the source address range of a signal into the network.

43. (previously presented) The computer program product of claim 40, wherein program code that uses the topological address space map further comprises program code

that reconciles differences between the topological address map and existing routes in the network.

44. (previously presented) The computer program product of claim 39, wherein program code that develops the topological address space map of the network further comprises:

program code that collects route entries from a route table on a router in the network; and

program code that compiles signal traffic statistics entries on the monitored plurality of signals passing through the router in the network, wherein each signal

traffic statistics entry includes a measure of the quantity of signals corresponding to a source address range.

45. (original) The computer program product of claim 44, further including program code that correlates each signal traffic statistics entry with a route entry.

46. (previously presented) A method for managing the routing of signals in a network, comprising:

receiving route entries from a route table in the network;

receiving Internet Protocol statistics data entries on signals flowing through one or more routers on the network, wherein each Internet Protocol statistics data entry includes a measure of the quantity of signals corresponding to a signal source address range;

developing an topological address space map of the network using the route entries and Internet Protocol statistics data entries; and

implementing the topological address space map.

47. (previously presented) The method of claim 46, wherein implementing the topological address space map comprises selecting a preferred route.

48. (original) The method of claim 47, wherein selecting the preferred route comprises:

selecting as the preferred route a route entry that is not selected naturally according to a network routing protocol and is not prohibited according to a network configuration parameter, subject to a determination that the route exceeds a signal quantity threshold.

49. (original) The method of claim 48, wherein the network routing protocol is the Border Gateway Protocol.

50. (previously presented) The method of claim 47, wherein implementing the topological address space map further comprises selecting a deaggregation route.

51. (original) The method of claim 50, wherein selecting the deaggregation route comprises:

selecting as the deaggregation route a route corresponding to a Internet Protocol statistics data entry, wherein the route is more specific than the route table route currently announced to the network.

52. (original) The method of claim 51, wherein the more specific route has a longer prefix length.

53. (previously presented) A computer program product for managing the routing of signals in a network, the computer program product comprising:

a computer readable medium that stores program code including:

program code that receives route entries from a route table in the network;

program code that receives Internet Protocol statistics data entries on signals flowing through one or more routers on the network, wherein each Internet Protocol statistics data entry includes a measure of the quantity of signals corresponding to a signal source address range;

program code that develops a topological address space map of the network using the route entries and Internet Protocol statistics data entries; and

program code that implements the topological address space map.

54. (previously presented) The computer program product of claim 53, wherein program code that implements the topological address space map comprises program code that selects a preferred route.

55. (original) The computer program product of claim 54, wherein the program code that selects the preferred route comprises:

program code that selects as the preferred route a route entry that is not selected naturally according to a network routing protocol and is not prohibited according to a network configuration parameter, subject to a determination that the route exceeds a signal quantity threshold.

56. (previously presented) The computer program product of claim 54, wherein program code that implements the topological address space map further comprises program code that selects a deaggregation route.

57. (original) The computer program product of claim 56, wherein the program code that selects the deaggregation route comprises:

program code that selects as the deaggregation route a route corresponding to a Internet Protocol statistics data entry, wherein the route is more specific than the route table route currently announced to the network.

Claims 58-61 (canceled)

62. (original) A system for routing network traffic, comprising:

a backbone;

a plurality of points of presence on the backbone, wherein each point of presence collects traffic data and sends the traffic data to a network operations center; and

a network operations center coupled to the backbone for receiving the traffic data, analyzing the traffic data, and automatically modifying the routing policy of the system based upon the analyzed data.

63. (original) The system of claim 62, further including:

a plurality of peering partner networks, each peering partner network connected to the backbone at one or more points of presence.

64. (original) The system of claim 63, wherein each peering partner network is paid a fee for all traffic the peering partner network receives from the backbone.

65. (original) The system of claim 64, wherein at least one peering partner network provides transit co to other Internet service providers that are not part of a peering partner network.

66. (original) The system of claim 62, further including:

one or more peering partners networks, each peering partner network connected to the backbone at nine or more points of presence by an OC-3 line connection.

67. (original) The system of claim 62, wherein each point of presence comprises:

a router for routing traffic between the backbone and one or more peering partner networks, and wherein the router further generates Internet Protocol statistics reports and reads the route tables and sends the

Internet Protocol statistics reports and the route tables to a computer; and

the computer for receiving the Internet Protocol statistics reports and the route tables and sending the Internet Protocol statistics reports and the route tables to the network operations center.

68. (original) The system of claim 67, wherein the computer further correlates the Internet Protocol statistics reports and the route tables.

69. (original) The system of claim 67, wherein the computer further receives preferred routes from the network operations corresponding to a new routing policy.

70. (original) The system of claim 69, wherein the computer further compares the new routing policy to an existing routing policy, and implements the differences between the new and the existing routing policies.

71. (original) The system of claim 62, wherein the backbone is a Dense Wave Division Multiplexing system.

72. (original) The system of claim 62, wherein each point of presence automatically collects traffic data and the network operations center automatically analyzes the traffic data.